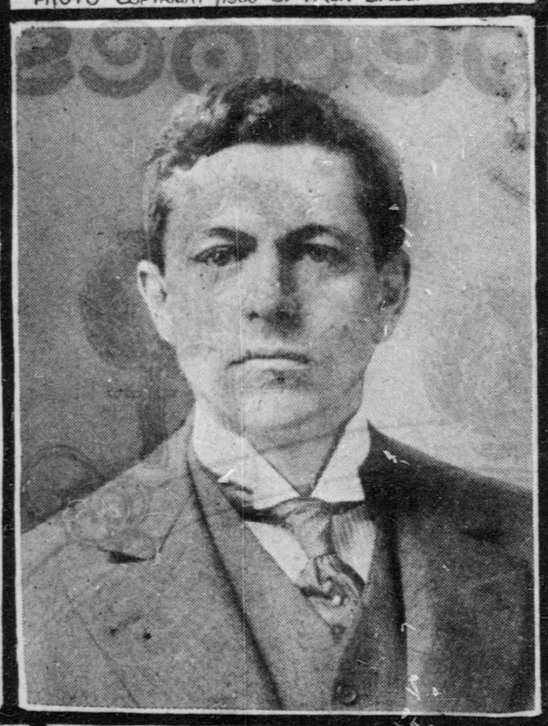
Old Ocean's Flood to Fight Fire



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COL. GEO. B. McCLELLAN—A MAYOR WITH IDEAS

MAN can fight fire and subdue it only with the aid of water. Manhattan's miles of buildings are the biggest woodpile in the world, for all their steel and stone, yet their sole protection to-day is the system which requires a thousand springs and streams to stay the Brobdingnagian thirst of Father Knickerbocker.

Happily this will soon be changed, and if ever the fire fiend threatens to sweep the island a regular tidal wave from the sea will quench the flames. With the Atlantic Ocean as an ally the fire fighters need fear nothing.

Mayor McClellan and Chief Croker both favor drawing on the inexhaustible salt water supply at the city's doors, and the Mayor has already asked for reports as to the cost and scope of the proposed system.

It is not impossible that public swimming baths of salt water may be a corollary of the fire mains, and that the pavements may be cooled in hot weather by rivulets of cold water in the gutters.

But, of course, the main object is to secure protection from fire. How that would be effected is herewith detailed.

To Pump a Tidal Wave From the Sea

SUPPOSE the Flatiron Building was on fire from its deepest basement to the twentieth story. In one minute after the fire laddies came into action 30,000 gallons of water could be poured on the blaze; in one hour, 1,800,000 gallons. And if the fire proved particularly stubborn and lasted for a day 43,000,000 gallons of the North and East rivers could be dumped at the intersection of Broadway, Twenty-third street and Fifth avenue.

By this time the big building would have been filled with water seven times over.

New York's Danger Zone

WHAT would happen in New York if a fire got the same start that it did in Baltimore? Would the New York Fire Department have to send to outside cities for help? Would the water supply hold out?

These questions have been asked and answered a thousand times since that memorable Sunday when the Mayor of ill-fated Baltimore sent broadcast the news that the fire had passed beyond the control of his fire-fighters. And there has been no certainty in the answer.

That a fire could, under favorable conditions, obtain such a start is quite probable. Comparing the portion of Manhattan south of Forty-second street now known as the "danger zone" with the fire-swept district of Baltimore it will be found that practically the same conditions exist in New York as existed in Baltimore before the fire.

New York possesses an advantage in that a possible 10 per cent. in fire fighting efficiency is obtained through a more abundant water supply and a larger number of hydrants, together with the fact that many New York business houses are protected to some extent by iron and steel shutters.

Apparently there is plenty of water for fire purposes in the danger zone, the maps of the water department showing numerous mains supplying that portion of the city south of Forty-second street.

Danger Zone Water Mains.

Here is a list of them:

	Number of mains and size.	
First avenue	1 48-in.	1 12-in.
Second avenue	1 36-in.	
Third avenue	1 30-in.	1 12-in.
Lexington avenue	1 30-in.	
Fourth avenue	1 48-in.	2 6-in.
Madison avenue	1 36-in.	1 16-in.
Fifth avenue	2 48-in.	2 36-in.
Fifth avenue	1 30-in.	1 12-in.
Sixth avenue	1 36-in.	1 12-in.
Sixth avenue	1 6-in.	
Broadway	1 30-in.	1 12-in.
Seventh avenue	1 30-in.	
Eighth avenue	1 30-in.	
Ninth avenue	1 30-in.	
Tenth avenue	1 48-in.	1 12-in.
Tenth avenue	1 6-in.	
Eleventh avenue	1 36-in.	1 12-in.
Eleventh avenue	1 6-in.	

From this table it will be seen that the city already has an immense supply of water all ready for use in subduing any widespread conflagration. But even this enormous supply is not sufficient. The trouble is that the water is delivered at a comparatively low pressure and distributed over such a wide territory that the use of fire engines becomes absolutely necessary.

Philadelphia has solved this difficulty by building in the heart of the business district a powerful pumping plant, with a special pipe line eight miles long. This line can be tapped at any plug, the force of the water being sufficient to supply six lines of hose at each plug without the use of engines.

Mayor McClellan, since the Baltimore fire, has been deeply interested in New York's water supply and fire protection. Acting on the reports of various heads of city departments, he recently addressed a letter to Fire Commissioner Hayes, Water Commissioner Oakley and Borough President Ahearn, calling for an expression of opinion as to the advisability of erecting at suitable places on the waterfront high pressure pumping plants of sufficient power to supply salt water throughout the business district.

Fire Commissioner Hayes is very much in favor of the plan, as are also Chief Croker, Commissioner Oakley and President Ahearn.

Although the plan is yet in embryo it is understood that the proposition to be considered includes the erection of at least three pumping plants equipped with the latest and most poweful gas engines. As the supply of salt water for fire fighting will only be needed occasionally it will not be necessary to run the pumps all the time until swimming baths, etc., are arranged.

They must, however, at all times be in condition to begin work at a second's notice.

This is possible with gas engines which can be started from a state of absolute immobility into full speed in eighteen seconds.

Thus, in an emergency, should one supply fail, another and yet another can be called into play. The principal mains will in all probability be laid along West Broadway, Broadway and the Bowery, with connections covering all the intervening blocks.

These mains will have to be unusually heavy to withstand the enormous pressure they will be called upon to bear, and special fittings will need to be employed at all spots subjected to unusually great strain.

Salt a Fire Extinguisher.

There are many other reasons why salt water would be beneficial for fighting fires and for general street use. Salt itself is an extinguisher of fires. It is an old-fashioned custom in the country when the chimney gets afire to throw a handful of salt down it. The salt creates a strangling gas which puts the fire out immediately.

Salt in water adds to the killing effect of the steam that is generated by great heat.

Salt water is healthful in every way. Professor Woolf, of New York, has discovered that it is the greatest curative agent in the world, and that a preparation made from it will kill the germs of consumption and all other diseases.

For this reason water sprinkled upon the street in Summer becomes doubly useful when it is salt water. The application of salt water to the gutters of Broadway and other streets once a week would sweep away and kill the germs of disease that find resting place in the dust.

The sprinkling of the streets with fresh salt water once a day would give the streets a fresh, fragrant odor that would greatly add to their delightfulness on a hot day in Summer.

Death to Mosquitoes.

Germs and mosquitoes will not propagate in salt water, and the fly nuisance in the side streets and on the East Side would become greatly abated by the use of salt water, for the reason that the salt and other chemicals destroy the eggs before they are hatched.

In Winter a great deal of trouble is always experienced in cities where fresh water is used, by the freezing of water in the mains. Salt water does not freeze easily. In case salt water was used in the mains in Manhattan streets it would probably never freeze, and in that way there would always be plenty to fight fire with.

Salt water does not evaporate as rapidly as fresh water, and when thrown upon stones of the street creates a chemical action which cools them rapidly—more rapidly than fresh water.

Salt water is heavier than fresh water, and the weight of a stream of salt water thrown against a flaming wall would have greater resistance than the light stream of fresh water sprayed from the nozzle of a fire hose.

In time it may very well come to be said of New York that it has two sorts of water in its streets—drinking water and bathing water. The fresh water that is supplied the city now is wasted in a hundred ways. For all that it is better than the average water supplied by municapalities.

Salt Water Baths.

A few years after the introduction of salt water into the streets for fire fighting it may be possible to take it by long-distance pipes from far out beyond the Narrows, and then it will be pure eough to use for private bathtubs. Think of taking a hot salt water bath in January as an offset to an attack of cold, or a cold salt water bath before breakfast every morning in summer as a stimulant!

The use of salt water in bathtubs and closets would also be to the lasting health of the city, for poor plumbing would then lose half of its terrors, because salt water is in itself a disinfectant.

There is another and still deeper significance which the students of evolution will think of. In salt water all animal life originated, and breathed salt water instead of air. Afterward animal life worked its way, little by little, out to dry land, leaving its cousin, the fish life, still in the ocean.

At Wood's Holl it was discovered that the heart of a turtle long dead when suspended in salt water began to beat again with regularity. And Professor Littlefield made the same discovery in relation to an ox heart. A salt brine injected into the veins of a man nearly dead braces up the heart and sometimes saves life. So it will be seen that salt water is closely connected with the welfare and health of humanity, and the coming of the time when salt water faucets will be found in every kitchen and bathroom means greater health for all concerned.

Up in the great watershed district whence Greater New York draws its drinking water it has been found that rapid steps must be taken to save the city from choking thirst. The watershed is being drained to its limit. In a countryside denuded of trees, as this one is, the watershed grows constantly smaller.

It will be necessary for New York to set out trees and cultivate forests along this water route, but all this will take time and initiative which New York lacks. Such things are not generally attempted till they become pressing necessities.

Economy of Drinking Water.

So the next best thing is to economize in the use of the drinking water. We are using every day thousands of gallons of pure drinking water to sprinkle streets, flush sewers and gutters and put out fire. We bring this precious water many, many miles by expensively built water mains and aqueducts, when we could get the same water right at our doors for nothing save the expense of pumping and piping it.

The new water mains will be larger, stronger and more easily handled than the old ones, and it will be possible to attach a hose to a hydrant and without any engine at all throw a stream over a four-story block. This because the pressure will be so great.

After Manhattan the other boroughs will adopt the salt water mains, and in such localities as Williamsburg, where the water mains are sometimes frozen in Winter, it will be found of untold advantage to the taxpayers.

If all Long Island were supplied with salt water mains it would no longer be necessary to worry about the lack of water for drinking in summertime. There would be enough and to spare, if salt water was used in every house for sanitary purposes instead of fresh water.

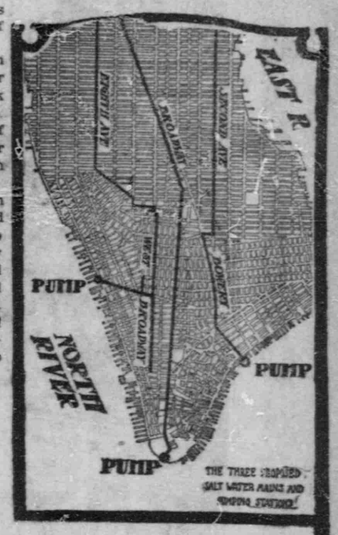
Salt water poured upon the slush in the streets in warm winter days would melt it away rapidly and carry it to the sewers, where it would find its way to the East and North rivers. It would save the cost of much sweeping and carting away of dust in summer time, for one man with a hose pipe could wash down a whole block in five minutes where now it takes a dozen men to do the work in half an hour.

SALT WATER SYSTEM WILL COME.

By Mayor McClellan.

NEW YORK should take advantage of the natural virtues it possesses in having a river of salt water on either side of the Island of Manhattan. A system of mains with the necessary pumping stations would put the whole ocean at the beck and call of the Fire Department. It would give New York the fullest possible protection.

When the system is in practical operation, with all the big buildings supplied with standpipes and sprinklers fed from the mains, such a disaster as that at Baltimore will be impossible.



WE NEED WATER TO FIGHT FIRES.

By Fire Chief Croker.

IN the use of salt water lies the only escape from the difficulty that Manhattan is getting deeper into every day. We need more fresh water for drinking purposes, and we need a great deal more water than we like to use now for fire purposes.

The plan is a good one and ought to be adopted at once.

CHIEF EDWARD F. CROKER.

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